

On certain classes of p-Valent functions by using complex-order and differential subordination.

ABSTRACT

The aim of the present paper is to study the p-valent analytic functions in the unit disk and satisfy the differential subordinations $z(I_p)^r, \frac{z(f(z))^{(j+1)}}{(p-j)(\mathcal{P}_p(r, \beta)f(z))^{(j)}} < (a + (a\beta + (A - B)\beta)z)/a(1 + Bz)$, where $\mathcal{P}_p(r, \beta)$ is an operator defined by Salagean and β is a complex number. Further we define a new related integral operator and also study the Fekete-Szego problem by proving some interesting properties.

Keyword: p-valent functions; Differential subordination; Analytical functions.